

dorsal or ventral keel; process on outer side of hind tibia bidentate, the anterior tooth about twice as long as the posterior.

*Hab.*—Guatemala City, Guatemala, Dec. 1911 (*W. M. Wheeler*). Very much like Brazilian *X. rotundiceps* Smith, but distinguished by the narrowed vertex (that of *rotundiceps* is exceptionally broad) and the punctuation of the abdomen. From *X. ordinaria* Smith it is readily known by the absence of a keel on under side of abdomen.

*Xylocopa wilmattæ* Cockerell, ined.

Guatemala City, Dec. 1911 (*W. M. Wheeler*). Exactly like the type.

*Anthophora marginata* Smith.

Guatemala City, Dec. 1911, Female (*W. M. Wheeler*). New to Guatemala.

*Bombus unifasciatus* Smith.

Guatemala City, Dec. 1911, Female (*W. M. Wheeler*).

*Eulæma mussitans* (Fabr.)

Guatemala City, Dec. 1911 (*W. M. Wheeler*).

## DROSOPHILA REPLETA WOLLASTON.

By FREDERICK KNAB,

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A series of this species has been recently received at the U. S. National Museum from Calabacillas, State of Chihuahua, Mexico, through Dr. S. McGibbon. In the course of determination it was found that although this species is a very widely distributed one, but little has been published concerning it. The species stands in the Aldrich catalogue as *Drosophila punctulata* Loew, but Becker, in the "Katalog der paläarktischen Dipteren," vol. 4, 1905, makes Loew's species and *D. adspersa* of Mik synonyms of *D. repleta* Wollaston, and there seems every reason to accept this synonymy. In justice to Mik it should be added that he himself suspected the identity of his species with Loew's, but he had no means of verifying it.

The species is a strikingly colored one. The mesonotum and scutellum are gray, mottled with small dark brown spots, these spots mostly confluent and tending to form four broad longitudinal stripes on the disk. The abdomen is marked black and yellow—dorsally there is a broad, yellow, continuous median longitudinal stripe and each segment is broadly yellow at the base and narrowly so on the apical margin. Mik gives a good detailed description of the insect, but it should be kept in mind that the coloration is subject to considerable variation and that the structural characters must be carefully compared. Thus in the majority of specimens before me the legs are yellow and the darker shadings described by Loew and Mik are not very obvious; in other specimens the legs are almost wholly dark, almost black. Yet these all belong to one species. I am inclined to think that the insect darkens somewhat with age and that perhaps also the character of the food may have some influence, as is known to be the case in certain blood-sucking Diptera.

The species appears to have a very wide distribution in the warmer parts of the globe. Wollaston's specimens came from Madeira, Loew's from Cuba and Mik's from Vienna (Austria) and Ashanti (West Africa); Williston records the species from the island of St. Vincent. There are many specimens in the National Museum collection, some of which stood determined by Mr. Coquillett as *punctulata*, while the rest turned up among the undetermined material. There is but a single specimen from the Old World, taken by C. W. Howard at Lourenço Marques, Portuguese East Africa; it agrees in every respect with American specimens. There are specimens from the following American localities: New York (E. B. Southwick); District of Columbia; St. Louis, Mo., Oct., 1904 (A. Busek); Flat River, Mo., Oct. (T. Pergande); Nashville, Tenn., 17 Aug. 1904 (H. S. Barber); Jacksonville, Fla. (Mrs. A. T. Slosson); Key West, Fla.; Willis, Tex.; San Diego, Tex., 25 May, at exuding sap of *Celtis occidentalis* (E. A. Schwarz); Brownsville, Tex. (C. H. T. Townsend); Claremont, Cal. (C. F. Baker); Cuernavaca, Mex., 7 July, 1900 (C. C. Deam); Amatlan de los Reyes, near Córdoba, Mex., 16 Feb., 1908, about wine-bottle in tavern (F. Knab); Nicaragua; Port Limon, Costa Rica, 24 Sept. 1905, one specimen at crab-hole in cacao orchard (F. Knab); Alhajuella, Panama, 15 April, 1911,

on wild fig (A. Busck); Havana, Cuba (S. Fernandez); Cayamas, Cuba, 28 May, 10 June, in house (E. A. Schwarz); Baracoa, Cuba, Sept., 1901 (A. Busck); Kingston, Jamaica, 11-9-07 (M. Grabham); St. Domingo, 8 June, 1905 (A. Busck); Ceara Brazil (F. D. de Rocha); S. Paulo, Brazil, bred from peaches (R. von Ihering); Buenos Ayres, Argentina.

## THE VELUTINOUS SPECIES OF THE GENUS CHRYSOPILUS.

By CHARLES W. JOHNSON.

Among the species of the genus *Chrysopilus* is a small group of velvety looking flies with dark smoky wings. These show an interesting combination of colors:—velvety black, with or without golden tomentum on the thorax and silvery white tufts of hairs on the abdomen, and comprise some of our most beautiful species of diptera of eastern and central North America. The group consists of four species, which can be readily defined by the following table:—

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|---|--------------------------|
| 1. Thorax entirely velvety black.....                                   | 2                        |
| Thorax covered with a dense golden tomentum.....                        | 3                        |
| 2. Abdomen entirely velvety black.....                                  | <i>velutinus</i> Loew.   |
| Abdomen with two rows of tufts of white pile.....                       | <i>connexus</i> sp. nov. |
| 3. Abdomen entirely velvety black.....                                  | <i>darisi</i> Johns.     |
| Abdomen with two rows of transverse tufts of white or light yellow pile | <i>thoracicus</i> Fabr.  |

### *Chrysopilus connexus* sp. nov.

*Male and Female.* Front and face velvety black, antennæ, proboscis and palpi black, the latter and the inferior orbits with long black hairs. Thorax with velvety black tomentum, scutellum with long black hairs and a tuft of yellowish hairs in front of the halteres in the male, pleuræ brownish black. Abdomen velvety black with two rows of tufts of white hairs on the posterior margins of the first to fifth segments, very small on the fifth segment of the male and apparently wanting in the female, the other tufts are more conspicuous in the female than in the male, venter velvety black, coxæ and femora black, tibiæ and tarsi yellow. Halteres brown. Wings smoky with the veins broadly margined with brown. Length male, 11 mm., female, 12 mm.

North Carolina Holotype (male) and Allotype in the U. S. National Museum. Paratype in the author's collection. I am